

1 avoids the more difficult method of vertical removal using cranes or similar
2 lifting devices.

3 Other aspects and advantages of embodiments of the invention will
4 be discussed with reference to the figures and to the detailed description of
5 preferred embodiments.

6 BRIEF DESCRIPTION OF THE DRAWING FIGURES

7 FIG. 1 is an elevated perspective schematic view of an irradiation
8 system according to an embodiment of the invention.

9 FIG. 2 is a schematic view of the upper level of the irradiation system
10 of FIG. 1.

11 FIG. 3A is a top plan schematic view of the lower level of the
12 irradiation system of FIG. 1.

13 ^{3B}FIG. ~~3A~~ is a sectional view taken along line ~~3A-3A~~ ^{3B-3B} in FIG. 3A.

14 FIG. 4 is an isometric view of an upper level shield according to an
15 embodiment of the invention.

16 FIG. 5 is a top view of the upper level shield of FIG. 4.

17 FIG. 6 is a partial exploded view of the upper level shield of FIG. 4.

18 FIG. 7 is a perspective view of a module according to an embodiment
19 of the present invention.

20 FIG. 8 is a perspective view of a corner module according to an
21 embodiment of the present invention.

22 FIG. 9 is a sectional view of a mounting arrangement for modules
23 according to an embodiment of the present invention.

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illustrated by FIG. 313, and the top of the lower level 200 can, for example, approximately coincide with ground level G. In FIG. 3A, a depiction of the radiation source 110, which is located on the upper level 100, is superimposed on the lower level 200 for illustrative purposes.

The lower level 200 is configured to irradiate articles using the third beam from the radiation source 110. For irradiation, articles are loaded onto trays and conveyed by the lower level conveyor system 230 through the third beam path 202 for irradiation by the downwardly projected third beam. The lower level conveyor system 230 is floor mounted and contains a process loop 250, an entry conveyor 270, and an exit conveyor 280. The process loop 250 includes a transport conveyor 282, a small roller flight conveyor 284, and a beam pass conveyor 286. At one end, the transport conveyor 282 connects to the small roller flight conveyor 284, and, at another end, to the beam pass conveyor 286. The transport conveyor 282 also intersects with the entry conveyor 270 and the exit conveyor 280. The roller flight conveyor 284 connects with the beam pass conveyor 286 to complete the process loop 250. The entry conveyor 270 connects a lowerator 289 with the process loop 250, the lowerator 289 serving to load trays from the load station 142 located on the upper level 100 to the lower level conveyor system 230. An elevator 290 raises trays of irradiated articles to the unload station 159 located on the upper level 100. The lowerator 289 and the elevator 290 may be, for example, "Z-lifters."

The exit conveyor 280 connects the elevator 290 with the process